

<b>Commercial Paving &amp; Recycling Co., LLC</b>	)	<b>Departmental</b>
<b>Cumberland County</b>	)	<b>Findings of Fact and Order</b>
<b>Scarborough, Maine</b>	)	<b>Air Emission License</b>
<b>A-455-71-I-A</b>	)	<b>Amendment #1</b>

After review of the air emissions license minor revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

1. Commercial Paving & Recycling Co., LLC (Commercial Paving), located in Scarborough, Maine was issued Air Emission License A-455-71-H-M/R on August 6, 2001 permitting the operation of emission sources associated with their asphalt batch plant and mineral processing facility.
2. Commercial Paving has requested a minor revision to their Air Emissions License to include the replacement of the asphalt batch plant stack scrubber with an H&B style baghouse.
3. This amendment will also include changes in the facility's equipment inventory including the removal of a crusher and the replacement of some previously licensed wood grinders and diesel units.
4. Upon a review of the Air Emission License for the Commercial Paving facility, it was found that the emissions calculations for the facility were inaccurately transcribed into the license. Therefore, this amendment will include the corrected emissions calculations for the facility.

**B. Emission Equipment**

Commercial Paving is authorized to operate the following equipment:

**Rock Crushers:**

<b><u>Designation</u></b>	<b><u>Power Source</u></b>	<b><u>Process Rate (tons/hr)</u></b>	<b><u>Control Device</u></b>	<b><u>Date of Manufacture</u></b>
C-88 Primary	Diesel	100	Spray Nozzles	1960

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**Portable Wood Grinders:**

<u>Designation</u>	<u>Power Source</u>	<u>Process Rate (yd<sup>3</sup>/hr)</u>	<u>Control Device</u>	<u>Date of Manufacture</u>
C-95	Diesel	50	Spray Nozzles	1997
C-96	Diesel	80	Spray Nozzles	2001
C-97	Diesel	80	Spray Nozzles	2001

**Associated Diesel Units**

<u>Equipment</u>	<u>Fuel Type, % Sulfur</u>	<u>Maximum Firing Rate</u>
Diesel C-88	#2 Fuel, 0.3%	20 gal/hr
Diesel C-95	#2 Fuel, 0.3%	8.1 gal/hr
Diesel C-96	#2 Fuel, 0.3%	8.5 gal/hr
Diesel C-97	#2 Fuel, 0.3%	8.5 gal/hr
Diesel 34	#2 Fuel, 0.3%	6.0 gal/hr
Diesel 30	#2 Fuel, 0.3%	4.6 gal/hr

**Asphalt Plant**

<u>Equipment</u>	<u>Producti on Rate (tons/hr)</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Date of Manufacture</u>	<u>Control Device</u>	<u>Stack #</u>
Kiln	100	43.5	1988	Baghouse	1
H-14 Hot Oil Heater	na	2.1	1988	na	H-14

**C. Application Classification**

Commercial Paving is applying to include the replacement of three diesel generator units with two new diesel generator units as well as the replacement of two previously licensed wood grinders with two new wood grinders and the permanent removal of a previously licensed rock crusher. Commercial Paving is also applying to include the replacement of the asphalt batch plant stack scrubber with a more efficient H&B style baghouse. The amendment will not result in a significant emissions increase of regulated pollutants and in the case of some of the regulated pollutants, the changes will result in emissions decreases. Therefore, this application is considered a minor modification and has been processed as such.

## **II. BEST PRACTICAL TREATMENT (BPT)**

### **A. Introduction**

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### **B. Asphalt Batch Plant**

Commercial Paving operates an asphalt batch plant with a production rate of 100 tons/hr and design firing rate of 43.5 MMBtu/hr firing #2 fuel and specification waste oil.

The current license allows for Commercial Paving to fire 200,000 gallons per year of #2 fuel oil with a sulfur content of no greater than 0.7% sulfur by weight based on a twelve-month rolling total in the facility's diesel units.

In the current license, the Department determined that BPT and NSPS for the control of particulate matter (PM) emissions from the asphalt plant dryer is the operation and maintenance of a wet venturi scrubber. Commercial Paving plans to replace the currently utilized wet venturi scrubber with a more efficient Hetherington & Berner (H&B) style bag house. The H&B style direct pulse bag house contains 324 single bags that are 6.0' in diameter and 8.0' long for a total of 4,071 square feet of cloth surface area. The unit will filter 24,000 cubic feet per minute (CFM) with a particulate removal efficiency of 99.0%.

Commercial Paving shall establish a system of maintenance, inspection and repair for the asphalt batch plant baghouse, which shall allow for periodic inspection of the system. Commercial Paving shall document compliance by means of a maintenance, inspection and repair log in which Commercial Paving shall record the date of all bag failures and all routine maintenance as well as all inspection dates and findings.

### **C. Equipment Inventory**

1. Commercial Paving has permanently removed the currently licensed units Diesel H-11, Diesel C-90 and Diesel C-91 from service and replaced Diesel C-90 and Diesel C-91 with units Diesel C-96 and Diesel C-97, both rated at approximately 1.2 MMBtu/hr.

The current license for Commercial Paving allows for the firing of #2 fuel oil with a sulfur content of no greater than 0.3% sulfur by weight in the facility's diesel units. Because the two new diesel units are considered new equipment, an application of Best Available Control Technology (BACT) is required. Ordinarily, BACT for new or modified diesel units is the requirement of the use of diesel fuel oil with a sulfur content of no greater than 0.05% sulfur by weight.

In this case, the Department shall consider BACT satisfied with the currently licensed requirement of the use of #2 fuel oil with a sulfur content of no greater than 0.3% sulfur by weight for the new diesel units for the following reason:

- a. Commercial Paving maintains a contract for oil delivery to their facility for #2 fuel oil with a sulfur content of 0.3% sulfur by weight as required by their current air emission license (A-455-71-H-M/R). If this amendment were to establish a sulfur limit of no greater than 0.05% sulfur by weight for the new equipment, Commercial Paving would be required to either establish a separate contract for fuel delivery for the new equipment, construct a new fuel containment and handling system to service the new equipment or establish a new contract for fuel oil with a lower sulfur fuel for all the facility's diesel units. This would cause undo time and monetary expense to the facility.
- b. The current license already establishes annual SO<sub>2</sub> emissions from the licensed diesel units based on the current total annual fuel oil usage limit of 100,000 gallons per year. Commercial Paving is not requesting that the currently licensed total annual fuel usage limit be changed as a result of this amendment. Therefore, there would be no net change in allowable SO<sub>2</sub> emissions from the diesel units that would result from requiring Commercial Paving to fire 0.05% sulfur fuel in the new diesel units.

The current license allows for Commercial Paving to fire 100,000 gallons per year of #2 fuel oil with a sulfur content of no greater than 0.3% sulfur by weight based on a twelve-month rolling total in the facility's diesel units and the H-14 Hot Oil Heater. Commercial Paving has not requested a change in this limit, therefore, Commercial Paving shall continue to be limited to firing no greater than 100,000 gallon per year of #2 fuel oil in the diesel units and the H-14 Hot Oil Heater.

A summary of the BACT analysis for the new diesel units is as follows

- a. BACT for emissions of SO<sub>2</sub> is a #2 fuel oil sulfur content not to exceed 0.3% sulfur by weight;

- b. BACT for PM for the diesel units is 0.12 lb/MMBtu. PM<sub>10</sub> emission limits are based on PM limits;
  - c. NO<sub>x</sub>, CO and VOC emission limits are based on AP-42 data dated 10/96;
  - d. Visible emissions from each new diesel unit shall not exceed 20% opacity on a 6-minute block average except, for no more than two 6-minute block averages in a 3-hour period.
2. Commercial Paving has permanently removed the currently licensed wood grinder units designated Wood Grinders C-90 and C-91 and replaced the wood grinder units with two new units designated Wood Grinders C-96 and C-97. The two new units each have maximum design process rates of 80 cubic yards per hour (yd<sup>3</sup>/hr) and both were manufactured in 2001.

The regulated pollutant from the wood grinders is particulate matter emissions. To meet the requirements of BACT for control of particulate matter (PM) emissions from the two new wood grinders, Commercial Paving shall maintain and operate water sprays on the new wood grinders in such a manner as to control visible emissions to no greater than 10% opacity on a 6-minute block average basis.

Commercial Paving shall maintain records of water spray maintenance, which shall include the date and nature of any water spray failures, the repair measures taken and the date and action of any preventative maintenance action taken on the water sprays. Commercial Paving shall also maintain a log of the wood grinder operations, which shall include the hours of wood grinder operation on a daily basis. The water spray maintenance log and the wood grinder operation log shall be kept on-site at the wood grinder. Visible emissions from the wood grinders is limited to no greater than 10% opacity on a 6-minute block average basis.

3. Commercial Paving has discontinued use of the previously licensed rock crusher designated C-85 Secondary and Commercial Paving does not plan to replace this unit at this time.

#### **D. Corrected Emissions Calculations**

Upon a review of the Air Emission License for the Commercial Paving facility, it was found that the emissions calculations for the facility were inaccurately transcribed into the license. This amendment will include the corrected emissions calculations for the facility.

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#### Total Allowable Annual Emission for the Facility

<u>Pollutant</u>	<u>Asphalt Batch Plant</u>	<u>H-14 Hot Oil Heater</u>	<u>Diesel Units</u>	<u>Total</u>
PM	1.4	0.13	1.8	3.3
PM <sub>10</sub>	1.4	0.13	1.8	3.3
SO <sub>2</sub>	9.9	0.32	1.7	11.9
NO <sub>x</sub>	4.0	0.15	26.2	30.4
CO	13.3	0.04	5.7	19.0
VOC	0.5	0.003	2.1	2.6

The Emissions Calculation are based on the following fuel restrictions:

- Commercial Paving shall be restricted to firing no more than 200,000 gallons per year (gal/yr) of #2 fuel oil and/or specification waste oil with a sulfur content of no greater than 0.7% sulfur by weight in the asphalt batch plant based on a twelve-month rolling total.
- Commercial Paving shall be restricted to firing no more than 100,000 gal/yr of #2 fuel oil with a sulfur content of no greater than 0.3% sulfur by weight in the diesel units and the H-14 Hot Oil Heater based on a twelve-month rolling total.

### III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non major source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. An air quality analysis is not required for this amendment.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-455-71-I-A, subject to the conditions found in Air Emission License A-455-71-H-M/R and in addition to the following conditions:

**The following condition shall replace condition (16) in Air Emission License A-455-71-H-M/R:**

**(16) Asphalt Plant**

- A. Emissions from the hot mix asphalt batch plant shall vent to an H&B style bag house particulate control system, and all components of the asphalt batch plant shall be maintained so as to prevent PM leaks. [MEDEP Chapter 115, BPT]
- B. Commercial Paving shall establish a system of maintenance, inspection and repair for the asphalt batch plant particulate control system, which shall allow for monthly inspections of the control equipment. Commercial Paving shall document compliance with this requirement through a maintenance, inspection and repair log. Commercial Paving shall utilize the maintenance, inspection and repair log to record the findings of the monthly inspections, as well as any routine maintenance and repairs done on the particulate control system. [MEDEP Chapter 115, BPT]
- C. Visible Emissions for the Asphalt Batch Plant baghouse are limited to no greater than 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]
- D. Fugitive particulate matter emissions from the asphalt batch plant operation shall be controlled so as to prevent visible emissions in excess of 10% opacity except for one 6-minute block average in any continuous 1-hour period. [MEDEP Chapter 101]
- E. The performance of the baghouse shall be constantly monitored by either of the following at all times the batch plant is in operation:
  - 1. PM Detector – when the detector signals excessive PM concentrations in the exhaust stream, Commercial Paving shall take corrective action within 24 hours, or immediately if opacity exceeds 20% based on a 6-minute block average basis.
  - 2. Personnel with a current EPA Method 9 visible emissions certification – when the opacity exceeds 20%, the hot mix asphalt batch plant is operating with insufficient control and Commercial Paving shall take corrective action immediately. [MEDEP Chapter 115, BPT]

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F. Total fuel use in the asphalt batch plant shall not exceed 200,000 gal/year of a combination of #2 fuel oil and specification waste oil with a sulfur content of no greater than 0.7% sulfur by weight, based on a 12 month rolling total. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total. [MEDEP Chapter 115, BPT]

G. Emissions from the asphalt batch plant shall not exceed the following:

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Asphalt	Grs/dscf	0.03	-	-	-	-	-
Batch Plant	lb/hr	7.5	7.5	88.1	34.0	13.8	9.2

[MEDEP Chapter 115, BPT]

H. Commercial Paving shall not process more than 10,000 cubic yards of petroleum contaminated soils per year without prior approval from the Department. [MEDEP Chapter 115, BPT]

I. Commercial Paving shall only process soils contaminated with gasoline and/or #2 fuel oil without prior approval from the Department. [MEDEP Chapter 115, BPT]

J. When processing petroleum contaminated soils, Commercial Paving shall maintain records which specify the quantity and type of contaminant in the soil as well as the origin and characterization of the contaminated soil. In addition, when processing contaminated soil, Commercial Paving shall maintain records of processing temperature, asphalt feed rates and dryer throughput on an hourly basis. The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management. [MEDEP Chapter 115, BPT]

K. Commercial Paving shall not process soils which are classified as hazardous waste or which have unknown contaminants. [MEDEP Chapter 115, BPT]

**The following condition shall replace condition (20) in Air Emission License A-455-71-H-M/R:**

a. Commercial Paving shall operate and maintain spray nozzles for particulate control on each wood grinder in such a manner as to control visible emissions to no greater than 10% opacity on a 6-minute block average basis. [MEDEP Chapter 115 BACT]



- b. Commercial Paving shall maintain a log detailing the maintenance on the water spray nozzles for the wood grinders. The maintenance log shall be located at the facility whenever the facility is in operation. [MEDEP Chapter 115 BACT]
- c. Commercial Paving shall maintain a log quantifying the hours of operation and production on a daily basis for the wood grinders. The operation log shall be located at the facility whenever the facility is in operation. [MEDEP Chapter 115 BACT]

**The following condition shall replace condition (21) in Air Emission License A-455-71-H-M/R:**

**(21) Associated Diesel Units**

- A. Commercial Paving shall no longer make use of diesel units H-11, Diesel C-90 and Diesel C-91. [MEDEP Chapter 115]
- B. Commercial Paving shall be licensed to make use of the following diesel units:

<b>Equipment</b>	<b>Fuel Type, % Sulfur</b>	<b>Maximum Firing Rate</b>
Diesel C-88	#2 Fuel, 0.3%	20 gal/hr
Diesel C-95	#2 Fuel, 0.3%	8.1 gal/hr
Diesel C-96	#2 Fuel, 0.3%	8.5 gal/hr
Diesel C-97	#2 Fuel, 0.3%	8.5 gal/hr
Diesel 34	#2 Fuel, 0.3%	6.0 gal/hr
Diesel 30	#2 Fuel, 0.3%	4.6 gal/hr

[MEDEP Chapter 115]

- C. Emissions from the diesel units shall be limited to the following:

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Diesel C-88	lb/hr	0.3	0.3	0.8	12.3	2.7	1.0
Diesel C-95	lb/hr	0.1	0.1	0.3	5.0	1.1	0.4
Diesel C-96	lb/hr	0.1	0.1	0.4	5.2	1.1	0.4
Diesel C-97	lb/hr	0.1	0.1	0.4	5.2	1.1	0.4
Diesel 34	lb/hr	0.1	0.1	0.3	3.7	0.8	0.3
Diesel 30	lb/hr	0.1	0.1	0.2	2.8	0.6	0.2

[MEDEP Chapter 115]

D. Visible emissions

1. Visible emissions from Diesels C-88, C-95, 34 and 30 shall not exceed 30% opacity each on a 6-minute block average except, for no more than two 6-minute block averages in a 3-hour period.
2. Visible emissions from Diesel Units C-96 and 97 shall not exceed 20% opacity each on a 6-minute block average except, for no more than two 6-minute block averages in a 3-hour period.

**The following are new conditions to Air Emissions License A-455-71-H-M/R:**

(26) Facility Fuel Use Limits

- A. Commercial Paving shall be restricted to firing no more than 200,000 gallons of #2 fuel oil and/or specification waste oil with a sulfur content of no greater than 0.7% sulfur by weight in the asphalt batch plant based on a twelve-month rolling total. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
  - B. Commercial Paving shall be restricted to firing no more than 100,000 gallons of #2 fuel oil with a sulfur content of no greater than 0.3% sulfur by weight in the diesel units and the H-14 Hot Oil Heater based on a twelve-month rolling total. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- (27) Commercial Paving shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605-C).

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(28) Commercial Paving shall pay the annual air emission license fee within 30 days of March 31 of each year. Pursuant to 38 MRSA 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA 341-D, Subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

This Amendment shall expire concurrently with Air Emission License A-455-71-H-M/R.

Date of initial receipt of application: **May 4, 2004**

Date of application acceptance: **May 6, 2004**

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by, Peter G. Carleton, Bureau of Air Quality